570-214-1064-A

CONDUCT AN AFRTS AUDIENCE SURVEY

TEC Lesson 570-214-1064-A

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OFFICE OF THE CHIEF OF PUBLIC AFFAIRS
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WASHINGTON, D.C. 20310

STUDENT/SUPERVISOR INSTRUCTIONS, PRE-TEST/POST-TEST, AND ANSWER KEY ARE CONTAINED IN THIS BOOK

JUNE 1986

D 101.6/7:

READ THE STUDENT/SUPERVISOR INSTRUCTIONS CAREFULLY. BE SURE YOU UNDERSTAND THEM COMPLETELY BEFORE BEGINNING THE LESSON. PLEASE DO NOT WRITE IN THIS BOOK.

The words "he," "his," and "men," when used in this publication, represent both the masculine and feminine genders, unless otherwise specifically stated.

STUDENT/SUPERVISOR INSTRUCTIONS

TYPE OF LESSON

- Broadcast Journalism

AUDIENCE

- Broadcast Journalists
- Skill level 3-4

TRAINING OBJECTIVES

Soldiers completing this lesson will be able to:

- Recognize the basic elements of a survey
- Identify the different types of surveys
- Choose a questionnaire
- Manage a mail survey
- Analyze survey results

MATERIAL/EQUIPMENT REQUIRED

- Pencil
- Paper

TIME REQUIRED

- Individual: 1.5 Hours
- Group: 1.5 Hours

REFERENCES

- AFRTS-PC DP-1
- AR 340-17
- DINFOS Public Affairs Handbook
- Direction Magazine, November 1973

STUDENT INSTRUCTIONS

- Take the Pre-test/Post-test. If you pass, you do not have to take the lesson.
- Make sure you have the material and equipment required to complete the lesson.
- Take the lesson. Use a separate sheet of paper for the exercises. Do not write in this book.
- When you complete the lesson, take the Pre-test/Post-test again. If you do not pass, take the lesson again.

SUPERVISOR INSTRUCTIONS

- Administer the Pre-test/Post-test to determine the need for the lesson. Responses to test questions must be made on a separate sheet of paper, not in the lesson book. To pass the test, a soldier must score at least 17 of the 25 possible points.
- Make sure students have the material and equipment required to complete the lesson.
- Administer the lesson to students who do not pass the Pre-test/Post-test. Remind them to write their responses to the exercises on a separate sheet of paper and not in the lesson book.
- Administer the Pre-test/Post-test to students who complete the lesson. Students who do not pass must take the lesson again.

TEC LESSON 570-214-1064-A

Conduct an AFRTS Audience Survey

This test consists of 22 questions that cover every training objective of the lesson. These questions have a total value of 25 points. When you have completed the test, check your answers against the Pretest/Post-test Answer Key on pages 51 and 52. If you do not score at least 17 points, you must take the lesson or take it again if you have already taken it. Write your responses on a separate sheet of paper. Do not write in this book.

1. TRUE or FALSE. An audience survey for AFRTS outlets is a yearly requirement as prescribed by AFRTS-BC.

2. The critical element in conducting an audience survey is to obtain____.

   a. sufficient information to justify needed program/personnel changes

   b. enough data to ensure that current programing is adequate

   c. responses from at least 30% of the listening/viewing audience

   d. sample responses which represent total audience responses

3. When discussing options for an AFRTS audience survey, generally three types are considered. They are_____.

   a. personal, face to face, and mail

   b. telephone, personal or face to face, and mail

   c. census, annual, and mail

   d. mail, telephone, and opinion

4. The two main elements of an audience survey are_____.

   a. problem and population

   b. sampling and percentages

   c. analysis and recording

   d. construction and collection

5. Generally speaking, three types of information are sought in surveys. Select the one answer that does not fit.

   a. identifying information

   b. information about the survey subject

   c. statistical feedback

   d. demographics of the respondent

6. There are two types of survey questionnaires-sometimes called survey schedules. They are_____ .

   a. personally-administered and telephonically-administered

   b. self-administered and interview-administered

   c. formatted and open-ended

   d. census and demographic

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7. Which one of the following survey steps allows the surveyor to deal with the problems of question wording, answer choices and interviewer procedures?

   a. sample

   b. collect

   c. construct

   d. pretest

8. The most perplexing and critical areas of the survey step SAMPLE are _____.

   a. method, size, and interpreting results

   b. size, form, and method

   c. method, size, and calculation

   d. method, size, and validation

9. The most difficult and important part of a survey is _____.

   a. canvassing the population

   b. validating the responses

   c. tabulating the results

   d. developing the questions

10. **Which one of the following BEST defines CHECK questions? They are two _____.**

    a. **differently worded questions located in different parts of the survey**

    b. **differently worded questions that bring out the same fact or opinion**

    c. **similar questions located in different parts of the survey**

    d. **different but related questions designed to elicit different responses**

11. **The survey question below is an example of which of the following questioning techniques?**

    "I watch at least 20 hours of AFN TV each week."

    yes _____

    no _____

    a. **agree-disagree approach**

    b. **use of dichotomous questions**

    c. **use of verbal or numbered scales**

    d. **having the respondent rank items**

12. **Which one of the following best defines OPEN-ENDED questions?**

    a. **They give the respondent a selection of possible answers**

    b. **They are usually "yes" or "no" or "true" or "false" types**

    c. **They allow the respondent to indicate preference or perceived importance by ranking the topic**

    d. **They allow the respondent to answer questions in his own words**

13. **In determining sample size, we are concerned with two factors. They are _____ .**

    a. **risk and response rate**

    b. **response rate and analysis**

    c. **access and confidence**

    d. **accuracy and confidence**

14. **There are five sampling methods available to the surveyor. List at least four of them.**

15. **Which one of the five sampling methods is recommended for conducting an AFRTS audience survey?**

16. **The most commonly used error or accuracy tolerance is plus or minus _____.**

    a. **5 percent with 95 percent confidence limits**

    b. **2 percent with 95 percent confidence limits**

    c. **4 percent with 95 percent confidence limits**

    d. **3 percent with 95 percent confidence limits**

17. **A successful mail survey is one that gets the needed information from enough of your sample to _____.**

    a. **make the necessary program/operational changes**

    b. **maintain a log of completed questionnaires**

    c. **make the results reliable**

    d. **disregard follow-ups on non-returned questionnaires**

18. **The typical response rate to a mail questionnaire is _____.**

    a. 5-15%

    b. 20-30%

    c. 40-50%

    d. 60-70%

19. **SITUATION: Your station has an estimated viewing/listening audience of 4,000 persons. You decide on the use of a mail survey. You have also decided to use the error or accuracy tolerance of plus or minus 5% with 95% confidence limits. How many responses must you receive at a MINIMUM for the survey to be valid? (Refer to Table 1)**

a. 341

b. 350

c. 1,500

d. 1,622

(TABLE 1)

SAMPLE SIZES NEEDED FOR DIFFERENT LEVELS OF RELIABILITY
(95% Confidence Limits)

Level of reliability

Population Size	+2%	+3%	+4%	+5%
50	49	48	46	44
100	96	92	86	80
250	226	203	177	152
500	414	341	273	218
1000	706	516	375	278
2000	1110	696	462	322
3000	1334	787	500	341
4000	1500	842	522	350
5000	1622	879	536	357

20. **Refer to the situation in question 19. Using the number you chose, how many questionnaires, at a MINIMUM, must you send to insure AT LEAST that number of responses? (Soldier will receive credit for his answer if he/she uses the correct method for computation.)**

21. **Refer to the situation in question 19. In your survey it was asked if the respondent watched the 6 o'clock news. 60% of the number of people surveyed said that they did watch the 6 o'clock news. When reporting this information to the station commander, we could say that we are confident that in 95 of 100 such surveys the true audience of the 6 o'clock news is between:**
(Refer to Table 2 on the following page)

    a. **53.7 and 66.3%**

    b. **58.4 and 61.6%**

    c. **55.6 and 64.4%**

    d. **54.8 and 65.2%**

Table 2 shows the percent spread or variability for different percentages obtained for different sample sizes given 95 percent confidence.

(TABLE 2)
VARIABILITY FOR DIFFERENT SAMPLE SIZES AND OBTAINED PERCENTAGES

(95% Confidence Limits)

Sample Size	Obtained Percentages											
	99	98	95	90	85	80	75	70	65	60	55	50
	1	2	5	10	15	20	25	30	35	40	45	
10	6.3	8.9	13.8	19.0	22.6	25.3	27.4	29.0	30.2	31.0	31.5	31.6
50	2.8	4.0	6.2	8.5	10.1	11.3	12.3	13.0	13.5	13.9	14.1	14.1
100	2.0	2.8	4.4	6.0	7.1	8.0	8.7	8.2	9.5	9.8	10.0	10.0
200	1.4	2.0	3.1	4.2	5.1	5.7	6.1	6.5	6.7	6.9	7.0	7.1
300	1.1	1.6	2.5	3.5	4.1	4.6	5.0	5.3	5.5	5.7	5.7	5.8
350	1.0	1.5	2.4	3.2	3.8	4.2	4.6	4.8	5.0	5.2	5.4	5.4
400	1.0	1.4	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
500	0.9	1.3	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.4	4.4

22. Situation: After analyzing the results of your most recent survey, it was determined that 65% of your respondents watched the 10 o'clock late evening news. This 65% falls into a range known as our_____.

a. response indicator

b. reliability index

c. confidence limits

d. declination figure

INTRODUCTION

The Armed Forces Radio and Television Service (AFRTS) provides information and entertainment programing to military, Department of Defense (DOD) civilians, and their family members overseas. If this is the AFRTS audience, and we wish to inform and entertain them, we'd better know their likes and dislikes when it comes to radio and TV programing. There is only one way this task can be accomplished and that is through an AFRTS audience survey.

This lesson will examine the basic elements of a survey and the different types of surveys in Part I.

In Part II we will construct a survey questionnaire and discuss how questions are developed.

Techniques for managing a mail survey and analyzing survey results will be explained in Part III.

In this lesson the words questionnaire and survey are interchangeable.

Audience Surveys as Necessities

Although the AFRTS Broadcast Center (AFRTS-BC) in California does not require AFRTS outlets to conduct an audience survey, only the disinterested would not conduct one. How could a station satisfy the wants and needs of its audience without knowing what those wants and needs were? No one tells us to take in nourishment each day but we do because it's a necessity. So it is with audience surveys. No one tells us to conduct them but they are conducted because they are a necessity IF you wish to determine the needs of the audience.

Granted, audience surveys require a great deal of extra effort but as a broadcast journalist you should be used to that by now.

Survey Sample

In conducting an audience survey, it is critical to sample a carefully selected part of the TOTAL AUDIENCE in such a way that the SAMPLE has the same characteristics as the total audience. The primary reason for selecting only a sample of the total audience is the impracticality of tabulating returns from the total audience which could number in the thousands.

If the survey is conducted properly and the sample indicates that the audience wants more television sports, it should be construed by the station that the total audience wants more television sports. Of course there will always be some error, but proper sample selection techniques allow minimal errors and assure some degree of confidence in the results.

To preserve the proportional answers/opinions of the total audience it is important that the sample be truly "representative". To achieve that with some degree of precision, a RANDOM selection process is recommended. Random sampling will be discussed at length in Part III.

Survey Expectations

As a rule audience surveys are a mystery to the uninitiated and a headache to broadcast journalists who have to conduct and analyze them for the station commander. But again, if surveys are conducted properly, the commander and everyone associated with the station will know how well they are serving their total audience.

What can we expect from an audience survey? Well, let's say that the station commander would like to know how many people watch the 6 o'clock news. Should the survey be constructed solely for that purpose? Certainly not. Although the station commander may be worried about the 6 o'clock news, he should try to obtain as much information about the station's viewing/listening audience as he can.

An audience survey can provide valuable information in five main areas. An audience survey can:

- determine the approximate size of the "potential" or "available" audience,
- define the viewing/listening habits of the audience,
- identify possible program/personnel changes,
- identify the demographics of your "typical" viewer/listener,
- demonstrate the station's public image as a provider of information and entertainment.

Elements of a Survey

There are two main elements of a survey--the PROBLEM and the POPULATION.

- PROBLEM: the big question or questions you want answered
- POPULATION: the group from which you select the people to answer your questions

Let's return to our original request by the station commander to find out how many people watch the 6 o'clock news. When stating the problem to the audience, the commander could indicate the purpose for the survey as "obtaining information concerning the listening/viewing habits and program preferences of our audience." The audience can then respond to a variety of questions. At the same time, it provides needed information for the station commander by also responding to specific questions concerning the 6 o'clock news.

Survey Steps

Now that we know the big question and have ideas for others, we need to follow a guideline to put our ideas into survey form. Listed below are ten basic steps in conducting a sample survey.

1. HYPOTHESIS: State the problem or state what you want to measure. Keep the wording to a minimum.
2. PLAN: Decide on procedures, methods, material and personnel.
3. SUPPORT: Get command approval to survey assigned personnel
4. SAMPLE: Choose which people to survey.
5. CONSTRUCT: Draft the questions and arrange the questionnaire format.
6. PRETEST: Administer the questionnaire in draft form to see if it yields useful responses. This step allows the surveyor to deal with problems of question wording, answer choices and interviewer procedures.
7. PRINT: Incorporate any changes to the questionnaire which may have resulted from your pretest efforts. Duplicate the questionnaire in desired quantity.
8. COLLECT: Distribute the questionnaires and gather the data.
9. TABULATE: Score the completed questionnaires then analyze and interpret the data.
10. REPORT: Report the survey results.

Survey Types

When you mention survey many think of people with notebooks going door-to-door with their questions. Although that is one way to conduct a survey, it certainly isn't practical for AFRTS purposes. With few exceptions, the audience of an AFRTS outlet is large and spread out over a fairly large geographical area. Keeping this in mind we shall concern ourselves with discussing three types of surveys.

- telephone
- personal or face-to-face
- mail

A telephone survey might be your first choice. There are several reasons why this method would appear to be attractive. A telephone survey

- is more economical than the other types of surveys unless your survey would require many long distance calls
- simplifies the selection of the survey sample and there is less chance of bias
- is relatively easy and can be conducted from an office or home
- is the fastest way to administer the questions and obtain the necessary feedback

On the flip side of the coin, there are also some disadvantages to surveying telephonically. A telephone survey:

- has to be short and this might limit the amount of needed information you will obtain,

- necessitates training the people you will use to conduct the interviews--requires extra time and the conduct of the interview cannot be monitored,
- limits the types of questions that can be asked and there is greater suspicion of questions involving personal matters,
- makes it impossible to use exhibits such as lists of alternative answers which afford the respondent a better chance to express his knowledge or opinion about the subject.
- excludes those without telephones-- AFRTS outlets are located in some countries where the simple use of the telephone for extended periods of time could prove frustrating. Sampling soldiers whose day-to-day activities place them in a field environment would surely be difficult.

Another widely used survey approach is the personal or face-to-face interview. In this situation the interviewer visits with the respondents at their homes or place of work. Some of these surveys can be conducted on the street. They have several advantages. Personal or face-to-face interviews

- offer the greatest flexibility in questioning methods--visuals may be used for aided recall or multiple choice questions,
- can be long thus providing a great deal of information from a single respondent,
- allows the sample to be designed so that it is truly representative of the entire population under study,
- permits the sample to be more selective in its coverage when the need is to survey a specific area or specific segment of the population--an example of this might be an affiliate of an AFRTS Network which is surveying its local audience to determine the quality of reception.

There are some disadvantages to personal or face-to-face interviews. Personal or face-to-face interviews

- may cost more than the other survey methods--the cost should be weighed against the amount of information obtained,
- requires more expertise in interviewing--more effort and persistence canvassing the population needed,
- make sample design more exacting and time consuming,
- are difficult to arrange because of duty requirements of the interviewer and the interviewee.

The most often used survey by AFRTS outlets is the mail survey. This type of survey has some unique advantages. Mail surveys

- are easy to handle-- no interviewers to train or monitor,
- are without interviewer bias (unless the originator of the survey reflects bias in the questions),
- generally cost less--can be deceptive however, because low rates of return may require many questionnaires to be mailed,
- make sample selection easy since prepared mailing lists can be used,
- allow for wide geographic coverage--makes the mail survey very attractive to station commanders,
- offer the opportunity for more candid replies to questions which may be embarrassing to answer during a telephonic or personal interview.

There are a number of disadvantages. Mail surveys

- limit sampling to the available mailing lists--letters can be addressed to "occupant" or "household" but these salutations usually leave a negative impression with the respondent,
- usually have a low rate of return which may bias the sampling--those who don't respond may be different from those who do, and when the non-respondents make up 50 to 70% of the audience, distortion can be serious,
- require questionnaire length to be held to a minimum--usually no more than two pages,
- use relatively simple questions thus eliminating the opportunity to probe for meaningful replies--no way to prevent replies from being influenced by subsequent questions since the respondent can read ahead before replying.
- prevent knowing if the addressee was actually the person who completed the questionnaire,
- obtain results slowly.

There are no hard and fast rules to tell you which survey should be used. The circumstances which are peculiar to your station will have to be weighed before deciding. The most often used survey within AFRTS is the mail survey. Managing a mail survey will be discussed at length in Part III.

Exercise 1.

1. In conducting an audience survey, it is critical to obtain _____.

   a. enough data to justify needed program/personnel changes.

   b. sufficient data to indicate that programing is adequate.

   c. sample responses from over half of the total audience.

   d. sample responses which represent total audience responses.

2. An audience survey can provide valuable information in five main areas. List four of them.

3. There are many ways in which a survey can be conducted. However, when options for a survey at an AFRTS outlet are being considered, those concerned discuss only three types of surveys. They are_____.

   a. personal, face-to-face, and mail.

   b. telephonic, personal or face-to-face, and mail.

   c. census, annual, and mail.

   d. mail, telephonic, and opinion.

4. The most commonly used survey by AFRTS outlets is the mail survey. List three advantages and three disadvantages to this type of survey.

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5. **Listed below are the definitions (in order) of the ten basic steps in conducting a sample survey. List the proper step next to its correct definition.**

1. _____ **State the problem or state what you want to measure.**
2. _____ **Decide on procedures, methods, material and personnel.**
3. _____ **Get command approval to survey assigned personnel.**
4. _____ **Choose which people to survey.**
5. _____ **Draft the questions and arrange the questionnaire format.**
6. _____ **Administer the questionnaire in draft form to see if it yields useful responses.**
7. _____ **Incorporate any changes to the questionnaire which may have resulted from your pretest efforts. Duplicate the questionnaire in desired quantity.**
8. _____ **Distribute the questionnaires and gather the data.**
9. _____ **Score the completed questionnaires then analyze and interpret the data.**
10. _____ **Report the survey results.**

ANSWERS TO SELF-EVALUATION EXERCISE

1. d. sample responses that represent total audience responses.
2. (Soldier must list four of the following answers. Wording may be different but intent must be the same.)
   - determine the approximate size of the "potential" or "available" audience
   - define the viewing/listening habits of the audience
   - justify possible program/personnel changes
   - identify the demographics of your "typical" viewer/listener
   - demonstrate the station's public image as a provider of information and entertainment
3. b. telephonic, personal or face-to-face, and mail.
4. Three of the following advantages and disadvantages must be listed. Wording may be different but intent must be the same.

   Advantages:
   - it is easy to handle
   - there is no interviewer bias
   - the cost is generally lower
   - sample selection is easy since prepared mailing lists can be used
   - wide geographic coverage is possible
   - possibly more candid replies will be given to questions which may be embarrassing to answer during a telephonic or personal interview

Disadvantages:

- sampling is limited to available mailing lists
- the usual low rate of return (20-30%) may bias the sampling
- questionnaire length must be held to a minimum
- questions must be relatively simple thus eliminating the opportunity to probe for meaningful replies
- there is no way to know whether the addressee was actually the person who completed the questionnaire
- results are obtained slowly

5. 1. hypothesis
   2. plan
   3. support
   4. sample
   5. construct
   6. pretest
   7. print
   8. collect
   9. tabulate
   10. report

Constructing a Questionnaire

Putting together a questionnaire can be similar to piecing together a puzzle. Once you get started in the right direction, the rest of the pieces fall into place. In this part of the lesson, we will lay out the steps in putting a survey questionnaire together.

There are basically two types of questionnaires-sometimes called survey schedules.

- self-administered
- interview-administered

For self-administered ones, the respondent fills it out himself. On interviewer-administered schedules, someone else records the answers. The main difference is that you must include directions for the respondents with the self-administered kind.

Make It Easy

If you could point to one specific rule that could apply to all surveys, it would be to make it easy for everyone involved. Thinking ahead, you should ask yourself such questions as: Who will answer the questions? How will the responses be recorded? What do we really want to find out? Use this information to construct your questionnaire and formulate the questions.

Most surveys are printed on standard sized paper or on 5" x 7" answer choice cards. It is good to print about one-third more surveys than needed. These can be used for training interviewers, providing sample copies, spoilage and lost copies.

Main Parts to a Survey

Generally there are three main parts of a survey which can be broken down into smaller pieces. Generally the three types of information sought in surveys are:

- identifying information at the beginning,
- information concerning the subject in the middle,
- demographic information about the respondent at the end.

The identifying information usually includes the name or title of the survey. It allows the respondent to quickly identify what the survey is about. This is usually followed by a statement of the general purpose of the survey and the confidential nature of the responses.

A cover letter is recommended with the questionnaire. The cover will usually contain the address of the sponsoring agency, the date completed and the questionnaire number. The address of the sponsoring agency (in our case the AFRTS affiliate) allows the respondent a chance to refer to the station for results. The date is necessary to determine if there were any significant events that might have occurred which may have influenced responses. The survey number is useful in sorting questionnaires, sequencing the collected data and distinguishing data from different areas.

Types of Questions

The most difficult and important part of the survey is developing the questions. Extracting factual information is much easier than getting a true measure of opinions.

You have several choices as to the kinds of questions for finding out how much someone knows about a subject. Each has certain advantages and disadvantages.

OPEN-ENDED--Questions allow the respondent to answer questions in his own words. While giving the respondent a maximum opportunity to express his viewpoint, you are confronted by the problem of trying to categorize the responses from many people. This takes more time and increases the chance for error when recording the answer. Sometimes people do not remember or know how to correctly express certain facts.

CHECK LIST OR MULTIPLE CHOICE--Questions give the respondent a selection of possible answers. All he needs to do is select one or more depending upon the question. The biggest advantage here is that the respondent can be reminded of possible answers he might have otherwise overlooked. In most cases it is wise to have an "other" category where the respondent can indicate a choice not given in the list. This is particularly helpful in pretesting possible answer choices to determine if any have been left out. A large percentage of "other" responses would indicate this.

DICHOTOMOUS (divided into two parts)--Questions are of the "yes or no" or "true or false" types. With these, you should also use "not sure" or "don't know" so that the respondent is not forced into a decision if he is really uncertain. Often this type of question is used as a qualifier. If the person answers "correctly", he is then asked to answer the remaining questions about that particular subject. For example, in an audience survey, you wouldn't expect answers about the presentation of the news if the respondent indicated that he didn't watch or listen to it.

RANK ITEMS--Sometimes it is useful to have people indicate some kind of preference or perceived importance for the items. The respondent is given a list of items and asked to assign a rank (1, 2, 3, etc.) to them. This would be useful ranking audience preference for different types of radio music shows or programs.

AGREE-DISAGREE--Measuring opinions can be accomplished by using different types of questions or statements. The agree-disagree approach asks the respondent to indicate whether he agrees, disagrees or has no opinion with regard to the statement. An example of this might be a general statement: "AFKN provides the latest in world news". (agree, disagree, no opinion)

OPINION SCALES--These are usually three, five, or seven point scales which can be used to measure the intensity of feeling about a subject. For example, you might ask the respondent to indicate how important she feels various sources of news are to her. Each source would be rated important or not important, such as:

__1__ very important
__2__ somewhat important
__3__ so-so
__4__ somewhat unimportant
__5__ not important

The scale would be listed at the beginning of the section with instructions to indicate a number in front of each listed source of news. Sometimes you may wish to condense such questions into a three point scale such as, important, so-so, and unimportant.

Most times you will find it necessary to use several different types of questions to obtain the needed information. However, there are some basic things to remember about the wording of all questions.

Writing the Questions

Questions should always be as concise as possible--the shorter, the better. Simple words which are familiar to the respondent will help you achieve this. Any technical wording or jargon should be avoided, replaced or explained. The questions should generate exactly the information desired and in terms that would assist tabulation and statistical analysis. A common error often made is that of OVERLAPPING CATEGORIES. A prime example of this is when a person is asked to check his age category and is confronted with choices like: 18-20, 20-22, 22-24. Which age group would you choose if you were 22 years old? Also, how would we know how many in the 20-22 age group actually belonged in the 22-24 group?

Another problem area is that of MULTIPLE-MEANING QUESTIONS that are confusing to the respondent and denies the surveyor a chance to clearly interpret the responses. An example of this would be: "Which medium is best for news and entertainment?" Each question should limit itself to only one point.

LEADING questions are those which are worded in such a manner as to suggest an answer. "Would you say that you are in favor of more radio news?" is leading. "How do you feel about more radio news?" is not leading. Do not ask leading questions!

CATCHWORDS or words with emotional connotations should be avoided. These words, such as draft-dodger, rapist, Commie--elicit strong feelings that influence how a person will respond. "Should stories concerning rapist activity be aired on the 6 o'clock newscast?" would draw a predictably negative response.

When feasible it is sometimes good to use CHECK questions. These are two questions worded differently, placed in different parts of the survey that bring out the same fact or opinion. These are used to bring out the internal consistency of the responses. "Do you listen to AFKN FM?" and "What is your favorite FM show?" would serve that purpose.

Question Order

The order of the questions is very important. They should be arranged in a logical manner that will avoid confusion and misunderstanding. Things to remember when arranging your questions:

- **Keep the knowledge and opinion questions separate.**
- **Keep questions dealing with similar subjects together.**
- **Specific questions should come before any general questions if both types are used.**
- **Opening questions should be easily answered. They should be interesting and make the respondent want to cooperate.**
- **Questions that might embarrass the individual should be at the middle or end of the questionnaire. Sensitive questions should be grouped with less probing ones.**

- **Demographic questions are placed at the end of the questionnaire. The demographic section asks the respondent to describe himself. Naturally, most respondents consider these questions very personal. The respondent is more likely to answer demographic questions after he is asked for his knowledge about the subject. Responses to these questions are useful when cross-tabulated with questions describing the different kinds of people that either know something or hold a particular point of view. Most military surveys include age, sex, education, military area, rank, years of service and component in this section.**
- **Leave a space at the end of the questionnaire for the respondent to give his personal feelings about the survey subject or survey itself. This is another way of letting the respondent know that his information and opinions are important to those who are conducting the survey. And, of course, it is always good policy to thank the respondent for cooperating.**

Pretesting Questions

Questionnaires should always be pretested on a small group of the intended population. Pretesting is nothing more than a trial run. Pretesting allows you a chance to deal with problems concerning:

- **question wording**
- **answer choices**
- **interview procedures**

Talking with the pretest group will also point up additional possible questions and problem areas.

Finally, one should always consider the possibility of repeating the survey. Questions that have been thoroughly pretested and have worked in the actual survey can be used to measure the same thing with another group, or at a different time. Comparison of audience data collected at different times is often useful in determining changes in perception and/or presentation. If a large segment of the audience indicated that they enjoyed the news in one survey and then in a subsequent survey indicated they no longer watch the news, a change in presentation of news might be in order.

Exercise 2.

1. **There are basically two types of questionnaires-sometimes called survey schedules. They are _____.**

   a. **letter administered and telephone administered.**

   b. **census administered and demographic administered.**

   c. **self-administered and interview-administered.**

   d. **formatted and open-ended.**

2. **Generally speaking, three types of information are sought in surveys. They are _____.**

   a. **identifying, subject, and demographic**

   b. **opinion-related, factual, and demographic**

   c. **identifying, demographic, and opinion-related**

   d. **subject, demographic, and factual**

3. **The address of the sponsoring agency, the date the questionnaire was completed and the questionnaire number can be found _____.**

   a. **in the demographic section.**

   b. **at the end of the survey.**

   c. **in the remarks section.**

   d. **in the cover letter.**

4. **The most difficult and important part to the survey is _____.**

   a. **arranging the questions.**

   b. **developing the questions**

   c. **scoring the question responses**

   d. **evaluating the question responses**

5. **The following survey question is an example of which questioning technique:**

   "As a source of news I consider radio:"

   _____ important

   _____ so-so

   _____ not important

   a. **agree-disagree approach**

   b. **use of dichotomous questions**

   c. **use of verbal or numbered scales**

   d. **having the respondent rank items**

6. **Which of the following definitions BEST describes CHECK questions? They are two _____.**

   a. **different but related questions designed to elicit different responses.**

   b. **different questions located in the same part of the questionnaire.**

   c. **differently worded questions that bring out the same fact or opinion**

   d. **different questions located in different parts of the questionnaire.**

7. **The survey question below is an example of a bad survey question. Which one of the following pitfalls did the survey writer fail to avoid?**

   "How would you rate our radio/TV news and sports?"

   a. **leading questions**

   b. **use of catchwords**

   c. **overlapping categories**

   d. **multiple-meaning questions**

8. **When writing your survey keep knowledge and opinion questions_____.**

   a. **together**

   b. **separate**

   c. **towards the beginning of the survey**

   d. **towards the middle of the survey**

9. **Demographic questions are placed at the end of the survey because they are _____.**

   a. **harder to complete and take more time**

   b. **more likely to be answered**

   c. **easier to tabulate and record**

   d. **easier to complete and take less time**

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SELF-EVALUATION EXERCISE

10. Pretesting your questions with a small group of the sample population allows you a chance to deal with problems concerning _____.

    a. question wording, answer choices, interview procedures

    b. survey distribution, survey control, survey feedback

    c. survey format, completion time, practicability

    d. interpretation, expense, practicability

11. Select TRUE or FALSE. Once a survey question is used, it should never be used again.

1. c. self-administered and interview-administered
2. a. identifying, subject, demographic
3. d. in the cover letter
4. b. developing the questions
5. c. use of verbal or numbered scales
6. c. differently worded questions that bring out the same fact or opinion
7. d. multiple-meaning questions
8. b. separate
9. b. more likely to be answered
10. a. question wording, answer choices, interview procedures
11. FALSE

Sampling

In Part I, we discussed the ten easy steps to survey success. One of those steps, SAMPLE, requires closer scrutiny. As defined, SAMPLE means "to choose which people to survey". We've alreadv discussed some aspects of sampling but now let's focus on the most perplexing and critical areas of sample:

- method
- size
- interpreting the results

Let's say that our total viewing audience numbers 4,000. This number includes assigned military and civilian personnel and their family members. This is the group we wish to sample survey.

Sample Method

There are five sampling methods available to the surveyor.

- simple random
- stratified random
- cluster
- systematic
- quota

SIMPLE RANDOM sampling means that everyone in the population has an equal chance of being included in the sample. This can be done in a wide variety of ways ranging from drawing mailing labels to assigning a number to each of the 4,000 persons in our audience and then selecting the MINIMUM number of persons needed to make our survey valid. If we needed 350 persons, at a minimum, we would randomly select 350 of the 4,000.

STRATIFIED RANDOM sampling means that before a sample is chosen, the population is FIRST divided into categories such as age, sex, grade, education. For an AFRTS audience survey in which the primary concern is how many of the total population is watching the six o'clock news, this type of sampling would be impractical.

But, if we wished to know how many E-1's, E-2's, E-3's, O-1's etc., were watching the six o'clock news, we would have to randomly sample each different pay grade.

CLUSTER sampling means that you pick up your 350 people in groups. For example, we might select 35 people by the simple random method from each of 10 housing areas also randomly selected from all of the housing areas that receive your signal. This method of sampling might prove convenient at best.

SYSTEMATIC sampling is sometimes called pattern sampling because it follows a definite pattern in choosing the sample. If we had a list of all of our 4,000 people, we might choose every 11th name. This method could also prove convenient.

QUOTA sampling is the fastest and cheapest--but, least reliable method. To obtain our sample, we might tell ten interviewers to get responses from 35 people in our listening/viewing audience. Who gets selected for the sample is then left up to the interviewers. That selection could be biased.

Sample Size

In determining sample size we are concerned with two things:

- accuracy (reliability)
- confidence (risk)

Other factors such as method of collecting data, interviewer bias, and question structure can also influence the reliability of our results.

When we take a random sample, we are taking a carefully selected part to show the characteristics of the whole population. There will always be some error, i.e., difference between the estimate provided by the sample and the percent of the whole population who watches the 6 o'clock news. However, random sampling allows us to specify ahead of time the amount of this error and the confidence we have that the amount will not be exceeded. In surveying an AFRTS audience, SIMPLE RANDOM sampling is recommended.

The sample size can be determined from the accompanying table (Table 1) which is indexed by the size of the total population (audience) and the desired level of reliability. The most commonly used error or accuracy tolerance is plus or minus 5 percent with 95 percent confidence limits.

This means that 95 of 100 sample surveys will not vary from the true population percentage by more than plus or minus 5 percent. For example, if 50 percent of the sample said that they watch the 6 o'clock news, this means that the true viewing audience may be as much as 55 or as little as 45 percent of the total audience.

Table one shows the sample size you need to achieve different levels of accuracy with 95 percent confidence. It is easy to see that when you raise the accuracy required, the sample size quickly expands.

(TABLE 1)

SAMPLE SIZES NEEDED
FOR DIFFERENT LEVELS OF RELIABILITY
(95% Confidence Limits)

Level of Reliability

Population Size	+2%	+3%	+4%	+5%
50	49	48	46	44
100	96	92	86	80
250	226	203	177	152
500	414	341	273	218
1000	706	516	375	278
2000	1110	696	462	322
3000	1334	787	500	341
4000	1500	842	522	350
5000	1622	879	536	357

For a listening/viewing audience of 4,000 and an error or accuracy tolerance of plus or minus 5 percent with 95 percent confidence limits, we need to randomly select 350 people.

Let's say we decide to use a mail survey to determine how many in our audience watch the six o'clock news. From Table 1, we know that we need to survey 350 people. Does this mean that we need to only send out 350 questionnaires? No, but we need to insure that we receive at least that number of questionnaires back. There is a formula to give us the needed number of questionnaires that have to be sent.

$$\frac{350}{X} = \frac{20}{100}$$

The typical response rate to a mail survey ranges from 20 to 30 percent. So our figure of 350 becomes 20 percent of the total number of questionnaires that were sent out. In the above formula, "X" is the number of questionnaires needed to make 350 equal 20 percent. Remember, that we are using 20 percent as the MINIMUM rate of return. Working the formula, we multiply 350 x 100 which gives us a figure of 35,000. That figure is then divided by 20 which gives us 1,750 which equals "X".

$$350 \times 100 = 35{,}000$$

$$35{,}000 \text{ divided by } 20 = 1{,}750$$

$$1{,}750 = \text{"X"}$$

$$\frac{350}{1{,}750} = \frac{20}{100}$$

To ensure that we receive at least 350 questionnaires back from our survey, we need to send out, at the MINIMUM, 1,750 questionnaires.

Using all of the data that we have discussed so far, lets say that we mailed out our 1,750 questionnaires. We now have our 350 responses. The survey showed that 80 percent of the respondents watch the six o'clock news. Can we now safely say that 80 percent of the total audience watch the six o'clock news? No, we can't. The 80 percent figure falls within a range called our CONFIDENCE LIMITS.

Table 2 shows the percent spread or variability for different percentages obtained for different sample sizes given 95 percent confidence.

Table 2

VARIABILITY FOR DIFFERENT SAMPLE SIZES AND OBTAINED PERCENTAGES

(95% Confidence Limits)

Obtained Percentages

Sample Size	99	98	95	90	85	80	75	70	65	60	55	50
	1	2	5	10	15	20	25	30	35	40	45	
10	6.3	8.9	13.8	19.0	22.6	25.3	27.4	29.0	30.2	31.0	31.5	31.6
50	2.8	4.0	6.2	8.5	10.1	11.3	12.3	13.0	13.5	13.9	14.1	14.1
100	2.0	2.8	4.4	6.0	7.1	8.0	8.7	8.2	9.5	9.8	10.0	10.0
200	1.4	2.0	3.1	4.2	5.1	5.7	6.1	6.5	6.7	6.9	7.0	7.1
300	1.1	1.6	2.5	3.5	4.1	4.6	5.0	5.3	5.5	5.7	5.7	5.8
350	1.0	1.5	2.4	3.2	3.8	4.2	4.6	4.8	5.0	5.2	5.4	5.4
400	1.0	1.4	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
500	0.9	1.3	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.4	4.4

To determine the spread or variability, we find the intersection of the sample size and the percentage obtained from the survey.

Given a sample size of 350, the audience of the six o'clock news is actually somewhere between 75.8 and 84.2 percent. The figure which is at the intersection of 350 and 80 percent is 4.2. This is then subtracted from and added to 80 percent to give you the true percentage of the total audience that watches the six o'clock news.

In presenting that portion of the survey results to the station commander, we must tell him to what degree it can be trusted. We can say we are confident that in 95 of 100 such surveys, the true viewing audience of the six o'clock news is between 75.8 and 84.2 percent.

Exercise 3.

1. **The most perplexing and critical areas of the survey step SAMPLE are _____.**

   a. **method, form and interpreting the results**

   b. **size, method, and calculation.**

   c. **method, size, and interpreting the results**

   d. **form, method, and calculation**

2. **There are five sampling methods available to the surveyor. Name them.**

3. **_____ sampling means that everyone in the population has an equal chance to be included in the sample.**

4. **The most commonly used error or accuracy tolerance is plus or minus _____.**

   a. **4% with 95% confidence limits.**

   b. **2% with 95% confidence limits.**

   c. **3% with 95% confidence limits.**

   d. **5% with 95% confidence limits.**

5. **If your station decides to use a mail survey, what is the response rate you should expect?**

   a. 20 to 30%

   b. 20 to 25%

   c. 25 to 30%

   d. 25 to 35%

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6. **SITUATION: Your station has a listening/viewing audience of 3,000 people. At the MINIMUM, how many people must be surveyed to represent the total audience using an error or accuracy tolerance of plus or minus 4% with 95% confidence limits? (Refer to Table 1 in this part of the Lesson)**

7. **(Refer to the situation in question #6) How many questionnaires must be sent, at the MINIMUM, to insure returns from the number of people needed to survey? (Show your computations)**

8. **SITUATION: In your station's survey, it was asked if he/she listened to the morning drive show on AM Radio. 70% of the respondents indicated that they did listen to the show. This 70% falls into a range known as our _____.**

   a. **reliability scale.**

   b. **response index.**

   c. **distribution scale.**

   d. **confidence limits.**

9. **Refer to the situation in question 8. When reporting this information to the station commander, we would say that we are confident that in 95 of 100 such surveys the true listening audience of the morning drive show is between _____ .**
   (Refer to table 2 in this part of the lesson)

   a. 65.9 to 74.1%

   b. 61.2 to 78.8%

   c. 63.7 to 76.3%

   d. 64.6 to 75.4%

ANSWERS TO SELF-EVALUATION EXERCISE

1. **c. method, size, and interpreting the results**
2. **simple random**
   stratified random
   cluster
   systematic
   quota
3. **Simple random**
4. **d. 5% with 95% confidence limits**
5. **a. 20 to 30%**
6. 500
7. 2,500

   computations:

$$\frac{500}{X} = \frac{20}{100}$$

$$500 \times 100 = 50{,}000$$

$$50{,}000 \text{ divided by } 20 = 2{,}500$$

$$2{,}500 = \text{“X”}$$

$$\frac{500}{2{,}500} = \frac{20}{100}$$

8. **d. confidence limits**
9. **a. 65.9 to 74.1%**

PRE-TEST/POST-TEST ANSWER KEY

1. FALSE
2. d. sample responses which represent total audience responses
3. b. telephone, personal or face-to-face, mail
4. a. problem and population
5. c. statistical feedback
6. b. self-administered and interview-administered
7. d. pretest
8. a. method, size, interpreting results
9. d. developing the questions
10. b. differently worded questions that bring out the same fact or opinion
11. b. use of dichotomous questions
12. d. They allow the respondent to answer questions in his own words.
13. d. accuracy and confidence

14. (Soldier must list at least 4 of the below answers to be correct)
    simple random
    stratified random
    cluster
    systematic
    quota

15. simple random

16. a. 5 percent with 95 percent confidence limits

17. c. make the results reliable

18. b. 20-30%

19. b. 350

20. (Soldier must show computations to be correct)

    1,750 Computation 350 20

    $\frac{\quad}{\quad} = \frac{X}{100}$

    350 x 100 = 35,000

    35,000 divided by 20 = 1,750

    1,750 = "X"

21. d. 54.8 and 65.2%

22. c. confidence limits

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